USSN: 09/975,502

Attorney Docket No.: 5972.US.P7

Response

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (cancelled)

Claim 2 (previously presented): A method of detecting breast cancer comprising the steps of:

- (a) obtaining a test sample from a patient;
- (b) detecting, via an immunoassay, a combination of polypeptides in said test sample selected from the group consisting of (1) BS106 (SEQ ID NO:8) and BU101 (SEQ ID NO:6), (2) BS106 (SEQ ID NO:8) and mammaglobin (SEQ ID NO:5) and (3) BS106 (SEQ ID NO:8) and multimeric polypeptide antigen (MPA), wherein said MPA comprises at least one BU101 polypeptide (SEQ ID NO:6) and at least one mammaglobin polypeptide (SEQ ID NO:5), presence of said combination of polypeptides indicating presence of breast cancer in said patient.

Claim 3 (previously presented): A method of detecting breast cancer comprising the steps of:

- (a) obtaining a test sample from a patient;
- (b) contacting said test sample with two antibodies specific respectively for each member of a combination of polypeptides, wherein said combination is selected from the group consisting of (1) BS106 (SEQ ID NO:8) and BU101 (SEQ ID NO:6), (2) BS106 and mammaglobin (SEQ ID NO:5) and (3) BS106 (SEQ ID NO:8) and MPA, wherein said MPA comprises at least one BU101 polypeptide and at least one mammaglobin polypeptide, for a time and under conditions sufficient to allow formation of antigen/antibody complexes of each member of said combination; and
- (c) detecting said complexes of each member of said combination, presence of said complexes indicating presence of breast cancer in said patient.

USSN: 09/975,502 Attorney Docket No.: 5972.US.P7

Response

Claim 4 (previously presented): A method of diagnosing breast cancer in a patient comprising the steps of:

- (a) preparing a tissue section or cell culture derived from a tumor excised from said patient;
- (b) exposing said tissue section or cell culture to two antibodies specific respectively for each member of a combination of polypeptides selected from the group consisting of (1) BS106 (SEQ ID NO:8) and mammaglobin (SEQ ID NO:5), (2) BS106 (SEQ ID NO:8) and mammaglobin (SEQ ID NO:5) and (3) BS106 (SEQ ID NO:8) and MPA, for a time and under conditions sufficient to allow formation of antigen/antibody complexes of each member of said combination; and
- (c) localizing presence of said complexes of each member of said combination in said tissue section or cell culture, presence of said complexes indicating presence of breast cancer in said patient.

Claim 5 (cancelled)

Claim 6 (withdrawn): A method of detecting breast cancer in a patient comprising the steps of:

- (a) obtaining a test sample from said patient;
- (b) detecting presence of at least one messenger ribonucleic acid (mRNA) molecule in said sample, wherein translation of said at least one mRNA molecule results in production of a polypeptide selected from the group consisting of mammaglobin, BU101 and BS106;
- (c) creating a complementary deoxyribonucleic acid (cDNA) molecule from said at least one mRNA molecule;
- (d) detecting presence of said cDNA molecule, presence of said cDNA molecule indicating presence of breast cancer in said patient.

Claim 7 (withdrawn): The method of claim 6 further comprising the step of amplifying said cDNA, wherein said cDNA comprises a nucleotide sequence encoding at least one polypeptide selected from the group consisting of mammaglobin, BU101 and BS106.

USSN: 09/975,502

Attorney Docket No.: 5972.US.P7
Response

Claim 8 (withdrawn): A method of detecting breast cancer in a patient comprising the steps of:

- (a) obtaining a test sample from said patient;
- (b) isolating at least one mRNA molecule from said test sample, wherein translation of said at least one mRNA molecule results in production of a polypeptide selected from the group consisting of mammaglobin, BU101 and BS106;
- (c) detecting a translation product of said at least one mRNA molecule, wherein presence of a translation product selected from the group consisting of mammaglobin, BU101 and BS106, in said sample, presence of said at least one polypeptide indicating presence of breast cancer in said patient.